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Arnold Schwarzenegger
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TECHNICAL BULLETIN

R&P FRM PM 2.5 SAMPLER March 2005

Issue

Rupprecht and Patashnick model 2025, Federal Reference Method PM2.5 Sequential Samplers (R&P FRM PM 2.5) are experiencing leak check failures.

Symptom

External leak checks are greater than the specified level in the R&P manual, 25 mmHg.

Solutions

Filter temperature probe

The filter temperature probe is connected with a plastic quick disconnecting fitting. Overtime, the plastic cracks and creates leaks. R&P has upgraded to a brass swagelock fitting and provided these to ARB. Verify that the unit has been upgraded to include this brass swagelock fitting and that an adapter has been installed. If not, contact Rich Michaud in the ARB's instrument repair shop for assistance.

V-Seals

Leaks have been associated with seals in the inlet assembly. There are 2 upper and 1 lower V-seals that need to be inspected monthly for cracks. Refer to "Section 10.0 Routine Service Checks" and "Section 11.0 Maintenance Procedure" of the R&P 2025 Standard Operating Procedure for periodic maintenance of the inlet assembly seals. In addition, lightly grease all surfaces of the seals on a monthly basis. The use of High Vacuum grease (Dow Corning) on the seals has shown to significantly reduce leaks.

Filter Cassettes

Monitoring and Laboratory Division is switching filter cassettes from blue Poly-Carbonate to white Delrin cassettes. Tests show that the white Delrin cassette has significantly decreased the leak check results to below acceptable levels. The Delrin cassette is machined to higher tolerances and forms a better seal when the upper and lower portions are mated.

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The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

